

Ecotox Report for Case # P-18-0272

General

| | | | |
|-----------------------|------------|--------------------------|------------|
| Status | 11/14/2018 | Report Status: | Complete |
| Date: | | CRSS Date: | 08/13/2018 |
| SAT Date: | | SAT Chair: | |
| Consolidated | N | Consolidated Set: | |
| PMN: | | | |
| Ecotox | | | |
| Related Cases: | | | |
| Health Related | | | |
| Cases: | | | |
| Submitter: | | | |
| CAS Number: | None | | |
| Chemical | | | |
| Name: | | | |
| Use: | | | |
| Trade Name: | | | |
| PV-max(kg/yr): | | Ecotox Assessor: | Au, Sarah |

Fate Summary Statement

| | |
|----------------------|--|
| Fate | P-18-0272 |
| Summary FATE: | |
| Statement: | MW = [REDACTED] with [REDACTED] < 500 and [REDACTED] < 1000 [REDACTED] with MP < 25 °C (E) S = Reacts slowly / < 0.001 g/L at 25 °C (E) Hydrolysis half-life = wk-mo VP < 1.0E-6 torr at 25 °C (E) |

BP > 400 °C

(E)

H < 1.00E-8 (E)

POTW removal (%) = PMN 90 via sorption and hydrolysis; then

Hyd Pdt [REDACTED] 90 via sorption and biodeg;

Hyd Pdt [REDACTED] 90 via sorption

Time for complete ultimate

aerobic biodeg = PMN wk-mo; Hyd Pdt [REDACTED] wk;

Hyd Pdt [REDACTED]

> mo

Sorption to soils/sediments = PMN strong; Hyd Pdt [REDACTED] strong;

Hyd Pdt [REDACTED] strong

PBT Potential: PMN P1-2B1; Hyd Pdt

[REDACTED] P2B1; Hyd Pdt [REDACTED] P3B*(low)

*CEB FATE: Migration to

ground water = PMN slow; Hyd Pdt [REDACTED] slow;

Hyd Pdt [REDACTED]

slow

Physical Chemical Information

| | | |
|--------------------------------|------------|--|
| Molecular Weight: | [REDACTED] | |
| Wt% < 500: | [REDACTED] | Wt% < 1000: [REDACTED] |
| Physical State - Neat: | [REDACTED] | |
| Melting Point: | | Melting Point (est): |
| MP (EPI): | | |
| Vapor Pressure: | | Vapor Pressure (est): <0.000001 |
| VP (EPI): | | |
| Water Solubility: | | Water Solubility (est): <0.000001 / Reacts slowly |
| Water Solubility (EPI): | | |
| Henry's Law:: | | |
| Log Koc: | | Log Koc (EPI): |
| Log Kow: | | Log Kow (EPI): |
| Log Kow Comment: | | |

SAT**Concern Level**

| |
|--|
| Ecotox 1 Rating (1): Ecotox No Rating Comment effects at saturation (NES) (1): Ecotox Rating (2): Ecotox Rating Comment (2): Ecotox Route of No releases to Exposure: water |
|--|

Ecotox Comments

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|--|
| Exposure N Based Review (Eco): Ecotox Comments: Exposure Based Testing: |
|--|

PBT Ratings

| Persistence | Bioaccumulation | Toxicity | Comments |
|-------------|-----------------|----------|-------------------------------------|
| 1-2 | 1 | | PMN |
| 2 | 1 | | Hyd Pdt [REDACTED] [REDACTED] |
| 3 | * | | Hyd Pdt [REDACTED], B*(low) |

Eco-Toxicity Comment:**Fate Ratings**

| Removal 90;90;90 in WWT/POTW PMN;Hyd Pdt [REDACTED];Hyd Pdt [REDACTED] (Overall): | | | | | | |
|--|---------------|-----------------------|----------------|------------------|-----------------------|---|
| Condition | Rating Values | Rating Description | | | | Comment |
| | | 1 | 2 | 3 | 4 | |
| Fish BCF: Log Fish BCF: WWT/POTW Sorption: | 3;3;3 | Low | Moderate | Strong | V. Strong | PMN;Hyd Pdt [REDACTED] [REDACTED];Hyd Pdt [REDACTED] |
| WWT/POTW Stripping: | 4;4;4 | Extensive | Moderate | Low | Negligible | PMN;Hyd Pdt [REDACTED] [REDACTED];Hyd Pdt [REDACTED] |
| Biodegradation Removal: | 4;2;4 | Unknown | High | Moderate | Negligible | PMN;Hyd Pdt [REDACTED] [REDACTED];Hyd Pdt [REDACTED] |
| Biodegradation Destruction: Aerobic Biodeg Ult: | 2-3;2;4 | Unknown | Complete | Partial | — | PMN;Hyd Pdt [REDACTED] [REDACTED];Hyd Pdt [REDACTED] |
| Aerobic Biodeg Prim: Anaerobic Biodeg Ult: | 2-3;3;4 | <= Days <= Days | Weeks Weeks | Months Months | > Months > Months | PMN;Hyd Pdt [REDACTED] [REDACTED];Hyd Pdt [REDACTED] |
| Anaerobic Biodeg Prim: | | <= Days <= Minutes | Weeks Hours | Months Days | > Months >= Months | [REDACTED] |

| Removal 90;90;90 in WWT/POTW PMN;Hyd Pdt [REDACTED];Hyd Pdt [REDACTED] (Overall): | | | | | | |
|--|---------------|--------------------|--------|----------|-----------|---|
| Condition | Rating Values | Rating Description | | | | Comment |
| | | 1 | 2 | 3 | 4 | |
| Hydrolysis (t1/2 at pH 7,25C) A: | | <= Minutes | Hours | Days | >= Months | |
| Hydrolysis (t1/2 at pH 7,25C) B: | | | | | | |
| Sorption to Soils/Sediments: | 2;2;2 | V. Strong | Strong | Moderate | Low | PMN;Hyd Pdt [REDACTED] yd [REDACTED] Pdt [REDACTED] |
| Migration to Ground Water: | 2;2;2 | Negligible | Slow | Moderate | Rapid | PMN;Hyd Pdt [REDACTED] ;Hyd Pdt [REDACTED] |
| Photolysis A, Direct: | | Negligible | Slow | Moderate | Rapid | |
| Photolysis B, Indirect: | | Negligible | Slow | Moderate | Rapid | |
| Atmospheric Ox A, OH: | | Negligible | Slow | Moderate | Rapid | |
| Atmospheric Ox B, O3: | | Negligible | Slow | Moderate | Rapid | |
| Bio Comments: The PMN material may hydrolyze with a half-life of weeks to months to give [REDACTED] complexes. The hydrolysis will be inhibited due to the low water solubility, but acidic/basic conditions may increase the rate of hydrolysis. | | | | | | |
| Fate Comments: | | | | | | |

Ecotoxicity Values

| Test organism | Test Type | Test Endpoint | Predicted | Experimental | Comments |
|---------------|-----------|---------------|-----------|--------------|--------------------------------|
| Fish | 96-h | LC50 | * | | No effects at saturation (NES) |
| Daphnid | 48-h | LC50 | * | | " |

| Test organism | Test Type | Test Endpoint | Predicted | Experimental | Comments |
|--|-----------|---------------|-----------|--------------|----------|
| Green Algae | 96-h | EC50 | * | " | |
| Fish | - | Chronic Value | * | " | |
| Daphnid | - | Chronic Value | * | " | |
| Green Algae | - | Chronic Value | * | " | |
| Ecotox Value EPA estimated environmental hazard of this new Comments: chemical substance using predictions based on the negligible water solubility of P-18-0272 (insoluble nonionic polymer; MW [REDACTED] with [REDACTED] < 1000); [REDACTED] with an unknown MP (P); S = negligible (P) and reacts very slowly [REDACTED]); effective concentrations based on 100% active ingredients and mean measured concentrations; hardness <150 mg/L as CaCO ₃ ; and TOC <2.0 mg/L. | | | | | |

Ecotox Factors

| Factors | Most Sensitive Endpoint | Assessment Factor | CoC | Comment |
|-----------------------|-------------------------|-------------------|-----|---|
| Acute Aquatic (ppb): | | | | An acute COC was not calculated because the acute toxicity values show no effects at saturation. |
| Chronic Aquatic(ppb): | | | | A chronic COC was not calculated because the chronic toxicity values show no effects at saturation. |
| Factors | Values | Comments | | |
| SARs: | [REDACTED] | | | |
| SAR Class: | [REDACTED] | | | |
| TSCA NCC Category? | None | | | |

Recommended Testing:

Ecotox Factors Environmental

Comments: Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risk because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA

estimated environmental hazard of this new chemical substance using predictions based on the negligible water solubility of P-18-0272 [REDACTED]; MW [REDACTED] with [REDACTED] < 1000). Acute and chronic toxicity values estimated for fish, aquatic invertebrates and algae are all no effects at saturation. These toxicity values indicate that the new chemical substance is expected to have low environmental hazard. Because hazards are not expected up to the water solubility limit, acute and chronic concentrations of concern are not identified.

Environmental Risk: Risks to the environment were evaluated by comparing estimated surface water concentrations with the acute and chronic concentrations of concern. Risks to the environment from acute and chronic exposure are not expected at any concentration of the new chemical substance soluble in the water (i.e., no effects at saturation).

Comments/Telephone Log

| Artifact | Update/Upload Time |
|------------|--------------------|
| [REDACTED] | [REDACTED] |